Work Orde June-16-14 2:25		77		*121	177*						Page 1
Revision ID:	D3601-1 Radius Block		A	Accept	*N900	040	100) *	Setup Sta	171	S1* S2*
Start Date: Required Date: Reference:		Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item l Customer:	D:					
Approvals:	Process Plan:	MLJ	Date: 14-06 - 18	Tooling:	D	ate:	_]	Run Sta	"17	R1*
				=	D :	ate:			Sto	» *N	R2*
Sequence ID/ Work Center II		peration escription		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revisio	on Nbr					-				
D3601	Rev A										
100				0.00					<u>.</u>		
<u>*100*</u>	Si	HEAR						_3	ø		MH
Shear ,		Memo blanks 9.00	" long +/- 0.030"Note: 1 blar	0.00 nk makes 8 pieces							14/07/05
110	н	AAS CNC VERTICAI	. MACHINING #1	0.00					_		»A
110 HAA\$1	••	Memo		0.00				23			WH
HAASiCNC vertical	machine #1		er Folio FA682 Rev: 👭		·						14/07/09
120	Qu	C2- Inspect parts off m	nachine FAI/FAIB	0.00				2.0			
120 QC		Memo		0.00		*,		23	_Ø_		MH

Quality Control

14/67/05

DQA:		Date:												TART
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / U	PDATE	W	ork Order u	odate only	\neg	AEROSPACE
					DISPOSITION				AGAINST		PARTMENT	·		
Work Orde	:r:					1			_		7		_	
Danis M	1_				Rework			Skid-tube	Crosstube	-		Water Jet	\dashv	Engineering
Part N					Scrap			Machining	Small Fab	_	4	d. Eng. Coor.	\dashv	Quality
NCR N	lo				Use-as-is Suspected Unapproved		Inerr	noforming Large Fab	Finishing Composite	-	Rec/Sto	re/Packaging Supplier		Other
Root				Desci	ription of work order update		Initial	Act	ion		Sign &		Т	
Cause	Date	Step	Qty		or non-conformance	Ch	nief Eng	Descr	iption		Date	Verification	ı	QC Inspector
Design													\Box	
Doc/Data		ŀ											ļ	
quip/Tooling	_													
landling/Pre	_													
Material	_	•												
Operator	_													
Offset/Setup			`										Į	
Process														
Supplier													ı	
Training	_													
Fransport													ı	
Jnapproved		<u> </u>											\Box	
						FA	ULT CAT	TEGORY						
Landin	ng Gear				General	_	1 .				7	r	—	
	Bending				Bend		1	rogram		_	Outside Dim	· · · · · · · · · · · · · · · · · · ·	-	Pressure/Forced
	Centre No	ot Conce	ntric		BOM/Route	_	Grain			_	Over/Under	ŀ	_	Set-up
<u> </u>	Cracks				Broken/Damage/Defect	<u> </u>	Hardwa			_	Part Incorre		\neg	Temperature/Cure
-	Crimp/Kir	nk/Ripple	e/Wave	-	Burrs		4	ion Incomplete/Ur	-	<u> </u>	Part Lost/Mi	ssing	_	Weld
Ļ	Cuffs			<u> </u>	Contamination	<u> </u>	4	ions Incomplete/U	Inclear	_	Part Moved	L		Wrong Stock Pulled
-	Crushing			<u> </u>	Countersink	<u> </u>	-	ned/off center		<u> </u>	Positioned V		_	
ŀ	Heat Trea			<u> </u>	Cut Too Short	<u> </u>	Mislabe			<u> </u>	Power Loss/	Surge		Other
	Inspection	•	Tube		Drawing	<u> </u>	Misread							
}	Marks/Ch				Drill Holes	\vdash	Off-set							
}	Turning S	-		—	Finish	\vdash	₹	Calibration						
li li	Wave/Tw	ust in Tuk	16	- 1	Fit/Function	1	IOut of 9	Seguence						

Work Ord June-16-14 2:2		1177		*121	1177*						Page 2
Item ID: Revision ID:	D3601-1			Accept	*N900	040	100)* s	etup Star	1 🔃	S1*
Item Name:	Radius Block								Stoj	, * //	S2*
Start Date: Required Date Reference:	6/16/14 : 6/16/14	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item II Customer:	D:					
Approvals:	Process Pla	ın:	Date: _	Tooling:	Da	te:		R	tun Star	* *N	R1*
			Date:			te:			Stoj	, *N	R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		QC8- Inspect parts - secon	nd check	0.00							DAS
120 QC Quality Control		Мето		0.00							25 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
ı											/ /
¹⁴⁰ ; *1⊿∩*		Small Fab		0.00				23x			14/07/07
Small Fab		Memo		0.00		26			· · · · · · · · · · · · · · · · · · ·		
Small Fab		1-Tumble 72-Deburr any	rough edges after tumbl	ing	23	Ha	14.7	23×			
150		Chemical Conversion Coa	at per QSI005 4.1	0.00						, 0	Q
150				0.00				23	_ 1467	14-7-	/

0.00

Memo

150
HandPinish

Hand Finishing

DQA:		Date:											•	TART
QA Closed:		Date:			WORK ORDER NON	-C(ONFO	RMANCE / U	PDATE	W	ork Order up	odate only	٦	AEROSPACE
Work Orde	r·				DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
Part N	0.				Rework Scrap Use-as-is Suspected Unapproved			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		1	Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root				Descr	ription of work order update		Initial	Act	tion		Sign &	· · · · · · · · · · · · · · · · · · ·	Т	
Cause	Date	Step	Qty		or non-conformance	Ch	nief Eng	Desci	ription		Date	Verification		QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved														
						FAI	ULT CAT	EGORY			"			
Landin	Bending Centre No Cracks Crimp/Kin Cuffs Crushing Heat Trea Inspection Marks/Ch Turning So	k/Ripple t n Strip in atter	/Wave Tube		General Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspecti Instruct Misalig Mislabe Misread Off-set	on Incomplete/Ui ions Incomplete/U ned/off center led	•		Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ct ssing Vrong		Pressure/Forced Set-up Femperature/Cure Weld Wrong Stock Pulled Other
ŀ	Wave/Tw				Fit/Function	<u> </u>	4	Seguence						

			-170										
Work Orde		1177		*121	177*							Page 3	
Item ID: Revision ID: Item Name: Start Date: Required Date: Reference:	D3601-1 Radius Block 6/16/14 6/16/14	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		*N900 Cust Item Customer:	ID:	100	ገ*	Setup	Start Stop	1 7	S1* S2*	
Approvals:	Process Pla	nn:	Date:	Tooling: SPC (Y/N):		ate:			Run	Start Stop	^IVI	R1* R2*	
Sequence ID/ Work Center II 160 *160* QC Quality Control	D	Operation Description QC3- Inspect Part Finish Memo		Set Up/ Run Hours S 0.00 27 0.00 9-89	Tool ID	Tool#	Plan Code	Accep Qty	t Re Qt		Reject Number	Insp. Stamp	
170 *170* Packaging Packaging		Identify as per dwg & Stoo	ck Location:	0.00				23	X _		<u>14-</u>	7-9.	DAS 26 9-89

180

QC21- Final Inspection - Work Order Release

0.00

120

QÇ ,

Memo

0.00

Quality Control

MUS 14-07-09 My-7-9

DQA:		Date:										DART
QA Closed:		Date:			WORK ORDER NON-	-C(ONFO	RMANCE / UPDATE	W	ork Order up	odate only	AEROSPACE
	14 .				DISPOSITION			AGAIN		PARTMENT		
Work Orde	er:								_	1	_	
Dowt A	1-				Rework			Skid-tube Crosstu			Water Jet	Engineering
Part N	10				Scrap			Machining Small F	_	-1	d. Eng. Coor.	Quality
NCR N	lo	•			Use-as-is Suspected Unapproved		mern	noforming Finishi Large Fab Composi		Kec/Stol	re/Packaging Supplier	Other
Nen					Juspected Oliapproved			Large Fab Composi	·е <u></u> _	J	2dbbilei [_	J LJ
Root				Desci	ription of work order update		Initial	Action		Sign &		
Cause	Date	Step	Qty		or non-conformance		nief Eng	Description		Date	Verification	QC Inspector
Design												
Doc/Data												
quip/Tooling												
landling/Pre												
Material		ļ										
Operator												1
Offset/Setup												
rocess						-						
upplier												
Training								•				
ransport												:
Jnapproved												
						FAI	ULT CAT	EGORY				•
Landir	ng Gear				General		,					
	Bending				Bend		Folio/P	rogram		Outside Dim	ensions	Pressure/Forced
	Centre No	ot Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
[Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorred	:i 🔽	Temperature/Cure
	Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspecti	on Incomplete/Unqualified		Part Lost/Mi	ssing	Weld
	Cuffs				Contamination		Instruct	ions Incomplete/Unclear		Part Moved		Wrong Stock Pulled
	Crushing				Countersink		Misalig	ned/off center		Positioned W	/rong	_
	Heat Trea	ıt			Cut Too Short		Mislabe	led		Power Loss/S	Surge	Other
	Inspection	n Strip in	Tube		Drawing		Misread	I		-	<u> </u>	
	Marks/Ch	atter			Drill Holes		Off-set					
	Turning S	equence			Finish		Out of 0	Calibration				
	Wave/Tw	ist in Tub	oe		Fit/Function		Out of S	Sequence				

Picklist Print

June-16-14 2:25:24 PM Work Order ID: 121177

121177

Parent Item:

D3601-1

D3601-1

Parent Item Name: Radius Block

Start Date: 6/16/14

Required Date: 6/16/14

Page 1

Start Qty: 20.00

**

Required Qty: 20.00

Comments:

IPP Rev:A New Issue 07-03-28 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B00750X00.1 25		Purchased	No			f	130.9320	_	2			

M6061T6B00750X00 125

Location	Loc Qty	Loc Code	
MAT049	130.932		
M127818	27.682		
M128866	3.25		
→ M129167	100		_2

DQA:		Date:											AG"	RT
QA Closed:		Date:			WORK ORDER NON-	-C(ONFO	RMANCE / UP		Wo	ork Order up	odate only	AERO	SPACE
•					DISPOSITION							<u> </u>		
Work Orde	r:				DISPOSITION				AGAINST	ושט	PARTMENT	/PROCESS		
					Rework			Skid-tube	Crosstube			Water Jet	Engineeri	ng
Part N	o				Scrap			Machining	Small Fab		Pro	d. Eng. Coor.	Qual	ity
					Use-as-is		Therr	noforming	Finishing		Rec/Sto	re/Packaging	Oth	er
NCR N	0				Suspected Unapproved			Large Fab	Composite			Supplier		
Root				Desci	ription of work order update		Initial	Acti	on		Sign &			
Cause	Date	Step	Qty	-	or non-conformance	Ch	nief Eng	Descri	ption		Date	Verification	QC Insp	ector
Design										Ì				
Doc/Data														
Equip/Tooling										ļ				
Handling/Pre														
Material														
Operator														
Offset/Setup								•						:
Process														
Supplier														1
Training														
Transport														
Unapproved												<u></u> .		
						FAI	ULT CA	TEGORY					<u> </u>	
Landin	g Gear			_	General				-		ı	_	_	
	Bending			L	Bend	L	1	rogram	1		Outside Dim	-	Pressure/For	ced
	Centre No	ot Concei	ntric	<u> </u>	BOM/Route		Grain		1		Over/Under	tolerance	Set-up	
	Cracks				Broken/Damage/Defect		Hardwa				Part Incorre	<u>-</u>	Temperature	e/Cure
	Crimp/Kir	nk/Ripple	/Wave	<u> </u>	Burrs	-	1	ion Incomplete/Un	· .		Part Lost/Mi	ssing	Weld	
-	Cuffs			<u> </u>	Contamination		4	ions Incomplete/U	nclear		Part Moved	L	Wrong Stock	Pulled
	Crushing			<u> </u>	Countersink	<u> </u>	4	ned/off center		-	Positioned V		-	l
ļ	Heat Trea			<u> </u>	Cut Too Short	_	Mislabe				Power Loss/	Surge	Other	
.	Inspection	•	Tube		Drawing	_	Misread							
Ļ	Marks/Ch			<u> </u>	Drill Holes	_	Off-set							
Ļ	Turning S	•		<u> </u>	Finish		4	Calibration						
	Wave/Tw	ist in Tub	oe .		Fit/Function	1	Out of S	Sequence						

DART AEROSPACE LTD	Work Order:	121177
Description: Radius Block	Part Number:	D3601-1
Inspection Dwg: D3601 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

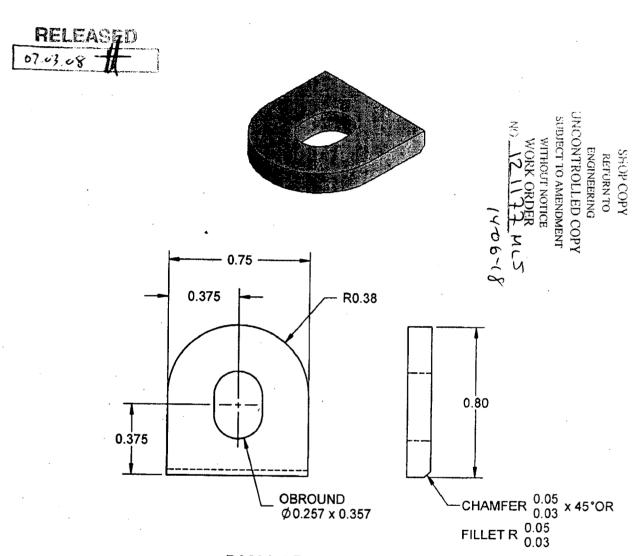
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.75	+/-0.030	_75	✓		14-04	Calipan
0.375	+/-0.010	-374	✓		1	1
0.375	+/-0.010	- 375	1			
Ø0.257	+0.006/-0.001	-259	~			
0.357	+/-0.010	2357	√			
R0.38	+/-0.030	-38	1		radgrage	~
0.80	+/-0.030	-801	√		14-04	c aliper
0.3 x 45°	+/-0.010 x 0.5°	- 3 × 45°	1		(1
			"			

Measured by: MH Audited by: 25
9-89 Preliminary Approval:
Date: 14/02/05 Date: 14-7-7 Date:

A 07.05.08 New Issue KJ/JLM	Rev	Date	Change	Revised by	Approved
B 11 08 22 Dimensions undated	Α	07.05.08	New Issue	KJ/JLM .	1.4
D 11.00.22 Differsions appeared	В	11.08.22	Dimensions updated	KJ 40	N/



	DESIGN CB		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	CHEC	EDA	APPROVED	DRAWING NO. REV	
	07.02.13			TITLE SCA	
	REV	DATE		DESCRIPTION	
ı	_A_		07.02.13	NEWISSUE	



D3601-1 RADIUS BLOCK

NOTES:
1) MATERIAL: ALUMINUM 5052-H32 SHEET, 0.125 THICK PER QQ-A-250/8 OR AMS 4016
(REF DART SPEC M5052H32S.125) OR
ALUMINUM 6061-T6 SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS 4025/4027
(REF DART SPEC M6061T6S.125)
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4) IDENTIFY WITH DART P/N "D3601-1" USING FINE POINT PERMANENT INK MARKER
5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
6) BREAK ALL SHARP EDGES 0.005 TO 0.050 MAX